

# Reclamation Manual

Directives and Standards

## *Temporary Release*

*(Expires 01/11/2011)*

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<b>Subject:</b>	Scientific Integrity
<b>Purpose:</b>	The purpose of this Directives and Standards (D&S) is to establish a uniform code of professional conduct for all employees in the Bureau of Reclamation who engage in scientific activities or use scientific information in decision making. The benefit of this D&S is to establish uniform guidance and responsibilities for Reclamation managers and employees to follow as they conduct and manage scientific activities.
<b>Authority:</b>	74 Federal Register 10671(March 11, 2009) Presidential Memo on Scientific Integrity dated March 9, 2009; 65 Federal Register 76262 (December 6, 2000) Federal Policy on Research Misconduct; 370 DM 752 (12-22-06) Discipline and Adverse Actions
<b>Approving Official:</b>	Director, Policy and Administration (Policy)
<b>Contact:</b>	Water and Environmental Resources Office, 84-55000

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1. **Introduction.** This D&S establishes responsibilities and requirements for Reclamation employees who engage in scientific activities or use scientific information in decision making and has the following objectives:
  - A. to increase awareness of the importance of scientific information and science as a method of discovery to maintain and enhance our effectiveness in fulfilling our mission, program requirements, and other Federal mandates, and in establishing credibility and value with the public, both nationally and internationally;
  - B. to assist employees in performing their duties with excellence and professionalism and in avoiding misconduct or the perception of misconduct when performing their duties; and
  - C. to ensure, to the maximum extent possible, that information Reclamation produces through scientific activities is reliable, objective, repeatable, transparent and available.
2. **Applicability.**
  - A. This D&S establishes requirements for the professional conduct and management of scientific activities, and the use of scientific information, by and on behalf of Reclamation.

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- B. This D&S applies to all Reclamation employees when they engage in, supervise or manage scientific activities, analyze the information resulting from scientific activities, or use scientific information in making agency policy, management or regulatory decisions.
- C. This D&S and associated responsibilities and requirements are in effect beginning on the date of release. This D&S contains no requirements to revisit scientific activities that have been completed or final decisions made using scientific information. Scientific activities and associated decisions that are being conducted or developed as of the date of this release shall be consistent with this D&S.
- D. This D&S applies to all Reclamation employees, contractors, and volunteers engaged in scientific activities including those working to facilitate financial assistance to non-Federal entities. Non-Federal project sponsors (i.e., recipients of Title XVI, Challenge Grants, Water Conservation Field Services Program, among others) or their contractors are subject to the Federal Acquisition Regulation, pertinent Office of Management and Budget Circulars, and Reclamation Grant or Cooperative Agreements Procurement Standards related to standards of conduct and conflict of interest and are not subject to the requirements contained in this D&S.

### 3. Definitions.

- A. **Conflict of Interest.** Any financial or other concern that might interfere with the actions or judgments of an employee when conducting or applying science because it could:
  - (1) significantly impair the employee's objectivity;
  - (2) create or contribute to an unfair competitive advantage for any person or organization; or
  - (3) result in personal or financial gain by individuals working for or on behalf of Reclamation.
- B. **Employees Who Engage in Scientific Activities.** Reclamation employees, in their official capacity, that conduct or supervise scientific activities on behalf of Reclamation who:
  - (1) compile, translate, and apply scientific information into formats used to formulate policy, management or regulatory decisions; or
  - (2) make agency decisions utilizing scientific information.

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C. **Science.** Science is:

- (1) a body of knowledge and a set of processes for advancing that knowledge;
- (2) information obtained and tested through use of the scientific method in a rational, systematic, testable, and reproducible manner; and
- (3) the observation and classification of facts to establish verifiable knowledge derived through induction, hypothesis and associated testing.

D. **Scientific Activities.** Actions conducted in a manner specified by standard protocols and procedures, as practiced in any of the physical, biological, or social sciences, as well as engineering and mathematics, which employ the scientific method. Examples of types of scientific activities may include: inventorying, monitoring, experimentation, study, research, modeling, and assessment.

4. **Responsibilities.**

- A. **Directors.** All Directors are responsible for ensuring that all employees within their directorate are familiar with this D&S and comply with its requirements.
- B. **Director, Policy.** The Director, Policy, is responsible for providing guidance associated with this D&S.
- C. **Reclamation Employees.** All Reclamation employees, including Directors, managers, and staff, are responsible for ensuring that they are familiar with this D&S and comply with its requirements. It is important that staff and managers communicate with each other about their respective roles associated with this D&S, especially when considering and acknowledging the level of scientific uncertainty in decision making. Any scientific uncertainty or representation about the scope or extent of the scientific foundation must be described and provided to decision-makers for their consideration when making agency decisions (see Paragraph 6. Uncertainty in Scientific Activities).

5. **Scientific Code of Professional Conduct.** To the best of their abilities, employees who engage in scientific activities must:

- A. within the resources provided, act to advance science and produce the highest quality, most reliable, and best available scientific information possible for Reclamation;
- B. comply fully with applicable laws, policies, regulations, standards and procedures regarding the development, conduct and application of scientific activities, and disclosure of scientific information (see Paragraph 9.D. requirements for complying

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with Reclamation Manual Policy and D&S related to the use of security, and release of sensitive and proprietary data including SLE 02-01 *Identifying and Safeguarding For Official Use Only Information* and RCD 05-01 *Information Management*);

- C. treat colleagues, other scientists and professional contacts and the public with respect;
  - D. place reliability and objectivity of scientific activities, reporting, and application of scientific data ahead of conflicting, non-scientific opinion or pre-determined decisions, irrespective of the source, and without conflict of interest;
  - E. acknowledge the ideas and work of others, take care to avoid misrepresentation of their own and others' work, and respect the intellectual property rights of others;
  - F. neither hinder the scientific activities of others nor engage in dishonesty, fraud, deceit, misrepresentation, coercive manipulation, or other scientific or research misconduct;
  - G. offer professional opinion, advice, and guidance only on subjects for which they are qualified (through professional education, training, or experience) and about which they are informed;
  - H. distinguish between positions that are rooted in scientific information and assessments and those rooted in organizational values, laws, or policies, and preserve this distinction in written or oral reports, findings, or presentations; and
  - I. adhere to standards of the National Science Foundation for treatment of animals and plants used in science and management of water and related resources.
6. **Uncertainty in Scientific Activities.** Employees who engage in scientific activities must:
- A. explicitly recognize, acknowledge, and to the extent possible, quantify the uncertainty inherent in, and limitations on, scientific data, analysis and understanding;
  - B. thoroughly articulate and acknowledge the assumptions upon which any scientific analysis and professional scientific opinion are premised; and
  - C. be forthright and honest about uncertainties and limitations associated with the scientific foundation used for developing possible policy options, or when making agency decisions, and acknowledge the uncertainties associated with any resulting prediction of consequences for water and related resources.

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7. **Maintaining Scientific Professionalism.** To the best of their abilities, employees who engage in scientific activities must:
- A. accept and objectively consider constructive criticism of their scientific activities and reports;
  - B. participate in appropriate peer reviews;
  - C. review and critique others' work in a respectful and objective manner and substantiate review comments made with the same care with which they report their own scientific work;
  - D. obtain any professional registrations or licensure as required by law, Reclamation Manual Policy, or D&S (HRM 05-01 *Professional Registration for Engineers and Architects*), and as may be required by the position description which the employee performs his/her duties;
  - E. regularly pursue additional education, training, and professional development; and
  - F. keep current with scientific literature commensurate with their role as scientist or decisionmaker.
8. **Use of Scientific Information.** Managers or other employees who make agency decisions utilizing scientific information will not suppress or alter scientific findings or conclusions, and will, to the extent permitted by law, be transparent in their use of scientific information in policymaking. Managers who are responsible for preparation of scientific documents or who make decisions based upon scientific studies will strive to ensure that:
- A. the resources allocated to scientific studies and analyses are sufficient and appropriate to the significance of the issues addressed;
  - B. any established quality assurance and quality controls (QA/QC) and peer review procedures or requirements are followed to ensure the integrity and soundness of the information provided;
  - C. reports or decision documents accurately reflect the science provided by the agency or acquired elsewhere;
  - D. such documents represent, to the extent possible, the relative certainty or limitations associated with the scientific information; and

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- E. the scientists they manage are not subject to inappropriate attempts to influence the results or representations of the scientific studies, or to deter them from carrying out the studies they have been directed to undertake.
9. **Accountability and Documentation.** Employees who engage in scientific activities must:
- A. be diligent in the creation, use, preservation, documentation, and maintenance of collections and data records;
  - B. adhere to established QA/QC programs;
  - C. follow Reclamation Manual D&S, *Information Management* RCD 05-01 for records retention;
  - D. comply with Federal laws and established agreements, and Reclamation Management Policy and D&S related to the use, security, and release of sensitive and proprietary data; particularly SLE 02-01, *Identifying and Safeguarding For Official Use Only (FOUO) Information*, and RCD 05-01, *Information Management*; and
  - E. provide relevant contractors and volunteers working on behalf of Reclamation with a copy of this D&S and inform them that they must conduct their scientific activities in accordance with this D&S.
10. **Violations.** Verified violations of the requirements in this D&S will be treated as a finding(s) of scientific or other misconduct (see Federal Policy on Research Misconduct, 65 Federal Register 76262, December 6, 2000). Disciplinary actions against Reclamation employees will be in accordance with Departmental Manual 370 DM 752.